Bruhat Bangalore Mahanagara Palike
Executive Engineer Yelahanka Division

Name of Work: Modified Estimate For Improvements to roads and Drains at Bettahalli colony in ward no-03 of Yelahanka Satellite Town Sub Division

Sl No	Description of Items	Unit	No	Length	Width	Depth	Quantity	Rate	Amount
	Civil Work								
1	KSRRB M300-14. **Excavation for roadwork in all types of soil** by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications MORTH Specificatio MORTH Specification No.301Loading and unloading with 8km lead= (I No-19.14,P No-143,KPWD SR 2018-19)								
	New Formation								
	Basavalingappanagara								
	Subbana Garden Rd		1	163.00	9.21	0.20	300.25		
	1st Main Rd		1	97.00	6.60	0.20	128.04		
	2nd Main Rd		1	115.60	6.58	0.20	152.17		
	Adtiyanagar								
	10th Main Rd		1	279.80	5.27	0.20	294.99		
	New Formation								
	C.C ROAD								
	Madeshwara layout								
	1st Cross Rd		1	29.30	4.50	0.20	26.37		
	2nd Cross Rd		1	20.60	4.50	0.20	18.54		
	3rd Cross Rd		1	22.10	4.60	0.20	20.33		
	4th Cross Rd		1	23.50	4.70	0.20	22.09		
	Rajjev Gandhi Nagara								
	Cross Rd-1		1	25.30	4.70	0.20	23.78		
	Cross Rd-2		1	34.70	3.76	0.20	26.09		
							1012.65		
				Upto 125%			**693.05**	**67.11**	**46511.57**
				Above 125%			**319.60**	**67.11**	**21449.09**
	Approved Rate	67.11							
2	KSRRB 300-46. **Scarifying by mechanical means** stone metal crust 50mm to 100mm thick by along with 20mm premix carpet / surface dressing and stacking of old serviceable materials including cost of all labour charges, HOM complete as per specifications.(P.No-146,I No-19.52)								
							0.00	**43.39**	**0.00**
	Approved Rate	43.39							
3	**Construction of granular sub-base Grading-V** as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision.(I No-20.5,P No-153)								
	New Formation								
	Basavalingappanagara								
	Subbana Garden Rd		1	163.00	9.21	0.15	225.18		
	1st Main Rd		1	97.00	6.60	0.15	96.03		
	2nd Main Rd		1	115.60	6.58	0.15	114.12		
	Adtiyanagar								
	10th Main Rd		1	279.80	5.27	0.15	221.24		
							656.58	**2093.87**	**1374800.87**

Sl	Description of Items	Unit	No	Length	Width	Depth	Quantity	Rate	Amount
	Approved Rate	2093.87							
4	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)								
	New Formation								
	Basavalingappanagara								
	Subbana Garden Rd		1	163.00	9.21	0.225	337.78		
	1st Main Rd		1	97.00	6.60	0.225	144.05		
	2nd Main Rd		1	115.60	6.58	0.225	171.19		
	Adtiyanagar								
	10th Main Rd		1	279.80	5.27	0.225	331.87		
							984.88	**2100.54**	**2068775.81**
	Approved Rate	2100.54							
5	KSRRB M500-6. Providing and **applying primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6), issue rate dated 01-07-2020								
	New Formation								
	Basavalingappanagara								
	Subbana Garden Rd		1	163.00	9.21		1501.23		
	1st Main Rd		1	97.00	6.60		640.20		
	2nd Main Rd		1	115.60	6.58		760.83		
	Adtiyanagar								
	10th Main Rd		1	279.80	5.27		1474.97		
							4377.23	**31.15**	**136359.99**
	Approved Rate	31.15							
6	KSRRB 500-7. Providing and applying **tack coat** using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications.								
	New Formation								
	Basavalingappanagara								
	Subbana Garden Rd		1	163.00	9.21		1501.23		
	1st Main Rd		1	97.00	6.60		640.20		
	2nd Main Rd		1	115.60	6.58		760.83		
	Adtiyanagar								
	10th Main Rd		1	279.80	5.27		1474.97		
							4377.23	**13.35**	**58,439.99**
	Approved Rate	13.35							
7	KSRRB M500-17. Providing and laying **dense graded bituminous macadam** using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6), issue rate dated 01-07-2020								
	New Formation								
	Basavalingappanagara								
	Subbana Garden Rd		1	163.00	9.21	0.05	75.06		
	1st Main Rd		1	97.00	6.60	0.05	32.01		

	Description of Items	Unit	No	Length	Width	Depth	Quantity	Rate	Amount
	2nd Main Rd		1	115.60	6.58	0.05	38.04		
	Adtiyanagar								
	10th Main Rd		1	279.80	5.27	0.05	73.75		
							218.86	6725.52	1471957.37
	Approved Rate	6725.52							
8	Providing and laying **bituminous concrete 40mm thick** with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic)(P.No-171,I No-21.78.12), issue rate dated 01-07-2020								
	New Formation								
	Basavalingappanagara								
	Subbana Garden Rd		1	163.00	9.21	0.04	60.05		
	1st Main Rd		1	97.00	6.60	0.04	25.61		
	2nd Main Rd		1	115.60	6.58	0.04	30.43		
	Adtiyanagar								
	10th Main Rd		1	279.80	5.27	0.04	59.00		
							175.09	7911.53	1385222.67
	Approved Rate	7911.53							
9	KSRRB M800-13.**Road Marking** with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)								
	New Formation								
	Basavalingappanagara								
	Subbana Garden Rd		2.5	163.00	0.10		40.75		
	1st Main Rd		2	97.00	0.10		19.40		
	2nd Main Rd		2	115.60	0.10		23.12		
	Adtiyanagar								
	10th Main Rd		2	279.80	0.10		55.96		
							139.23	477.30	66,453.80
	Approved Rate	477.30							
10	KSRRB M800-35. **Supply and Installtion of Moulded Shank Raised Pavement Markers** made of polycarbonate and ABS(Acrylonitrile Butadiene Styrene) moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to Specifications of Category A of MORTH Circular No RW/ NH/33023/10-97 – DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 mm and height not less than 30 mm) from the body is to be a minimum value of 500 Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer.(P.No-187,I No-24.41)								
	Basavalingappanagara								
	Subbana Garden Rd		3	18.00			54.00		
							54.00	374.94	20,246.66

	Description of Items	Unit	No	Length	Width	Depth	Quantity	Rate	Amount
	Approved Rate	374.94							
11	KSRRB M2100-10. Providing and laying **Plain cement concrete of mix 1:3:6** with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications. (P.No-222,I No-27.18)								
	RCC Drain								
	Madeshwara layout								
	1st Cross Rd		2	27.80	1.00	0.15	8.34		
	2nd Cross Rd		2	20.60	1.00	0.15	6.18		
	3rd Cross Rd		2	22.10	1.00	0.15	6.63		
	4th Cross Rd		1	23.50	1.00	0.15	3.53		
	For C.C Road								
	New Formation								
	Madeshwara layout								
	1st Cross Rd		1	29.30	4.50	0.15	19.78		
	2nd Cross Rd		1	20.60	4.50	0.15	13.91		
	3rd Cross Rd		1	22.10	4.60	0.15	15.25		
	4th Cross Rd		1	23.50	4.70	0.15	16.57		
	Rajjev Gandhi Nagara								
	Cross Rd-1		1	25.30	4.70	0.15	17.84		
	Cross Rd-2		1	34.70	3.76	0.15	19.57		
							127.58		
				Upto 125%			45.99	5690.83	261742.44
				Above 125%			81.59	5690.83	464300.57
	Approved Rate	5690.83							
12	**Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30** over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints,including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to(P.No-176,I No-22.6.1)								
	New Formation								
	Madeshwara layout								
	1st Cross Rd		1	29.30	4.50	0.15	19.78		
	2nd Cross Rd		1	20.60	4.50	0.15	13.91		
	3rd Cross Rd		1	22.10	4.60	0.15	15.25		
	4th Cross Rd		1	23.50	4.70	0.15	16.57		
	Rajjev Gandhi Nagara								
	Cross Rd-1		1	25.30	4.70	0.15	17.84		
	Cross Rd-2		1	34.70	3.76	0.15	19.57		
							102.91		
				Upto 125%			45.99	5469.42	251559.30
				Above 125%			56.91	5469.42	311278.85
	Approved Rate	5469.42							

	Description of Items	Unit	No	Length	Width	Depth	Quantity	Rate	Amount
E1	KSRRB 300-1. **Earthwork excavation by manual means** for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications(I No-19.1, P No-143), 8km lead								
	Basic rate	130.00							
	Area Weightage 6%	7.80							
	Loading and Unloding & Lead, 8KM	77.48							
	Total	**215.28**							
	Above 4.95%	10.66							
		225.94							
		Cum							
	RCC Drain								
	Madeshwara layout								
	1st Cross Rd		2	27.80	1.00	0.90	50.04		
	2nd Cross Rd		2	20.60	1.00	0.90	37.08		
	3rd Cross Rd		2	22.10	1.00	0.90	39.78		
	4th Cross Rd		1	23.50	1.00	0.90	21.15		
							148.05	**225.94**	**33,449.88**
E2	Providing and laying plain/reinforced cement concrete for side drains using **M20 nominal mix concrete with OPC at 300 kgs.** With 20mm and sown size granite metal course aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compcted for walls and bottom including centring shuttering cost of material HOM of machinary curing etc., complete execluding cost of steel as per MORTH specification no. 1500, 1700, 2200 including cost of material labour HOM complete as per specification. (P.No.271, I.No.37.59.2 of PW, P&IWTD S.R 2018-19)								
	Basic rate	6670.00							
	Area Weightage 6%	400.20							
	Total	**7070.20**							
	Above 4.95%	349.97							
		7420.17							
		Cum							
	RCC Drain								
	Raft								
	Madeshwara layout								
	1st Cross Rd		2	27.80	0.75	0.15	6.26		
	2nd Cross Rd		2	20.60	0.75	0.15	4.64		
	3rd Cross Rd		2	22.10	0.75	0.15	4.97		
	4th Cross Rd		1	23.50	0.75	0.15	2.64		
	Wall								
	1st Cross Rd		4	27.80	0.15	0.60	10.01		
	2nd Cross Rd		4	20.60	0.15	0.60	7.42		
	3rd Cross Rd		4	22.10	0.15	0.60	7.94		
	4th Cross Rd		2	23.50	0.15	0.60	4.22		
							48.09	**7420.17**	**356827.97**
E3	KSRRB - M2300-14: **Providing TMT steel reinforcement** for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.MORTH Specification No. 1600 & 2200 for TMT bars Fe 500. (P.No.239, I.No.29.29.2 of PW, P&IWTD S.R 2018-19)								
	Basic rate	69804.00							

Description of Items	Unit	No	Length	Width	Depth	Quantity	Rate	Amount
Area Weightage 6%	4188.24							
Total	73992.24							
Above 4.95%	3662.62							
	77654.86							
	Tn							
RCC Drain								
For Drain 60kg/cum			48.09	0.06		2.89		
						2.89	77654.86	224060.15
E4	Providing and Fixing **pre cast covering Slab 100mm thick** made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge. (Data Rate)								
Data rate	2337.00							
Above 4.95%	115.68							
	2452.68							
	Sqm							
Precast Slab								
Madeshwara layout								
1st Cross Rd		2	27.80	0.75		41.70		
2nd Cross Rd		2	20.60	0.75		30.90		
3rd Cross Rd		2	22.10	0.75		33.15		
4th Cross Rd		1	23.50	0.75		17.63		
						123.38	2452.68	302599.58
E5	KSRB 4-1.6 ; Providing and laying in position **plain cement concrete of Mix 1:2:4** with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregtes @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 (P.No-13,I No-4.3 of PWD BCSR 2018-19)								
Basic Rate	5422.00							
Area Weightage 6%	325.32							
Total	5747.32							
Above 4.95%	284.49							
	6031.81							
	Cum							
For Kerb Stone								
Madeshwara layout								
1st Cross Rd		2	27.80	0.20	0.10	1.11		
2nd Cross Rd		2	20.60	0.20	0.10	0.82		
3rd Cross Rd		2	22.10	0.20	0.10	0.88		
4th Cross Rd		1	23.50	0.20	0.10	0.47		
Adtiyanagar								
10th Main Rd Dead End		1	120.00	0.20	0.10	2.40		
						5.69	6031.81	34,321.01
E6	Providing and fixing **pre cast solid cement concrete kerb stones** made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete. As per the direction of Engineer incharge. (P.No.27, I.No.5.30 of PW, P&IWTD SR 2018-19)								
Basic Rate Rs.=	408.00							
Area Weightage 6%	24.48							

Description of Items	Unit	No	Length	Width	Depth	Quantity	Rate	Amount
Total Rate Rs. =	432.48							
Above 4.95%	21.41							
	453.89							
	Nos							
For Kerb Stone								
Madeshwara layout								
1st Cross Rd		2	27.80			55.60		
2nd Cross Rd		2	20.60			41.20		
3rd Cross Rd		2	22.10			44.20		
4th Cross Rd		1	23.50			23.50		
Adtiyanagar								
10th Main Rd Dead End		1	120.00			120.00		
						284.50		
						632.00	**453.89**	**286857.06**

E7 **Painting two coats** after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 Specification No. KSRRB M800-6 (P.No.180, I.No.24.1 of PW, P&IWTD SR 2018-19)

Basic Rate Rs.=	80.00							
Area Weightage 6%	4.80							
Total Rate Rs. =	84.80							
Above 4.95%	4.20							
	89.00							
	Sqm							
For Kerb Stone								
Madeshwara layout								
1st Cross Rd		2	27.80		0.30	16.68		
2nd Cross Rd		2	20.60		0.30	12.36		
3rd Cross Rd		2	22.10		0.30	13.26		
4th Cross Rd		1	23.50		0.30	7.05		
Adtiyanagar								
10th Main Rd Dead End		1	120.00		0.30	36.00		
						85.35	**89.00**	**7,595.95**
							Total Construction Cost	**9184810.58**
							Miscellaneous & Rounding Off	**963.42**
							Total	**9185774.00**

Assistant Engineer
Ward 03
BBMP Bangalore

Asst. Executive Engineer
Yelahanka New Town Sub Division
BBMP Bangalore

Executive Engineer
Yelahanka Division
BBMP Bangalore

Technical Sanction
Accorded For Rs. 9185774.00
Head of A/C. 3802
CER NO :..56..... Dt:.21.05.2021